"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKIN, I.G.; SHCHAPOV, A.A.; YEGOROVA, Ye.N., red.; VAKLASHOVA, R.A., red.

[Regulation of the estuaries of lumber-floating rivers] Regulirovanie ust'evykh uchastkov lesosplavnykh rek. Moskva, TSentr. nauchno-issl. in-t informatsii i tekhniko-ekon. issledovanii po lesnoi, tselliulozno-bumazhnoi, derevoobrabatyvaiushchei promyshl. i lesnomu khoziaistvu, 1963. 21 p. (MIRA 17:5)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKIN, Ivan Grigor'yevich, kand.tekhn.nauk; VOSKRESENSKIY, Yuliy Sergeyevich, nauchnyy sotrudnik; LEBEDEV, Mikhail Petrovich, nauchnyy sotrudnik; SOKOLOV, Aleksandr Vasil'yevich, inzh.-konstruktor; FREYNKMAN, Isay Yefimovich, inzh.-konstruktor. Prinimali uchastiye: POPOV, A.I., kand.tekhn.nauk; YAKOVLEV, Ye.V., inzh.-konstruktor. LAZAREV, M.P., red.; POLTEVA, B.Kh., red.izd-va; PROKOP'YEVA, L.N., tekhn.red.

[Dredging streams used in timber rafting with the ZRS-1 dredging pump] Proizvodstvo dnouglubitel'nykh rabot na lesosplavnykh putiakh zemlesosno-refulernym snariadom ZRS-1. Moskva, Goslesbumizdat, 1959. 111 p. (MIRA 13:1)
(Dredging machinery)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

LOMONOSOV, Ivan Grigor'yevich, starshiy nauchnyy sotrudnik; ARYKIN, Ivan Grigor'yevich; VASIL'KOVA, Regina Yevgen'yevich; ZHURENKOV, Yevgeniy Aleksandrovich; LEBEDEV, Mikhail Petrovich; OVCHINNIKOVA, Dina Mikhaylovna; YUZVUK, Vladimir Yefimovich. Prinimali uchastiye: ARYKIN, I.G., starshiy nauchnyy sotrudnik; YUZVUK, V.Ye., starshiy nauchnyy sotrudnik; LEBEDEV, M.P., starshiy nauchnyy sotrudnik; OVCHINNIKOVA, D.M., mladshiy nauchnyy sotrudnik; VASIL'KOVA, R.Ye., mladshiy nauchnyy sotrudnik; ZHURENKOV, Ye.A., mladshiy nauchnyy sotrudnik. ZHURAVLEV, B.A., red.izd-va; PARAKHINA, N.L., tekhn.red.

[Album of designs of dams to be built on timber floating rivers] Al'bom konstruktsii lesosplavnykh plotin. Moskva, Goslesbumizdat, 1959. 212 p. (MIRA 13:7)

1. TSentral'nyy nauchno-issledovatel'skiy institut lesosplava (for all, except Zhuravlev, Parakhina).
(Lumber--Transportation) (Dams)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKIN, Ivan Grigor'yevich; LEBEDEV, Mikhail Petrovich; YUZVUK, Vladimir Yefimovich [deceased]; LAZAREV, M.P., red.; KONARDOVA, T.F., red. izd-va; LOBANKOVA, R.Ye., tekhn. red.

[Organization and carrying out of irrigation and construction work on rivers used for lumber floating] Organizatsiia i proizvodstvo meliorativno-stroitel'nykh rabot na splavnykh putiakh. Moskva, Goslesbumizdat, 1961. 95 p. (MIRA 15:1)
(Lumber—Transportation) (Hydraulic engineering)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKIN, I.G.; SHCHANOV, A.A.

Melioration and construction work on lumber-floating rivers. Biul.tekh.-ekon. inform. Gos. nauch.-issl. nauch. i tekh. inform. 17 no.9:58-61 S '64 (MIRA 18:1)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKIN, I., kand.tekhn.nauk; BEYLIN, I., inzh.

Screw anchors and their mechanized burial into the ground. Rech.transp. 23 no.9:43-45 S '64. (MIRA 19:1)

1.TSentral'nyy nauchno-issledovatel'skiy institut lesosplava (for Beylin).

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

BAKAYEV, M.T.; ARYKOV, A.I.

Fracture tectonics of Dzhezkazgan mineral deposits and stability of blocks. Trudy Inst. gor. dela AN Kazakh.SSR 12:122-129 '63.
(MIRA 17:8)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

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88607

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S/127/60/000/005/002/008
B012/B058

AUTHORS: Ibrayev, Sh. I., Candidate of Technical Sciences, Arykov, A. I., Mining Engineer, Kanafin, K. N., Chief Engineer

TITLE: Large-scale Ore Mining With the Aid of Hole Charges and Short-delay Blasting

PERIODICAL: Gornyy zhurnal, 1960, No. 5, pp. 33 - 35

TEXT: The use of vehicles with individual drive in the mines of the Dzhezkazgan permitted large-scale mining of ores by means of hole charges at faces with and without benches. Experiments were conducted in mine No. 45 of the Dzhezkazganskoye rudoupravleniye (Dzhezkazgan Mine Administration) in order to determine the parameters for large-scale mining. The rock hardness was 12 to 14 according to Protod'yakonov. Three working programs for drilling and blasting were elaborated for mining at a face with benches. The scheme according to the third working program is shown in Fig. 3. Experiments showed that this scheme is most suitable for large-scale ore mining at a face with one bench. The holes were charged

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Large-scale Ore Mining With the Aid of Hole Charges and Short-delay Blasting

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with ammonite No. 6 and blasted by the short-delay method. Work at the faces is at present carried out with individually driven vehicles according to the third working program. As from June 1959, experimental work has been conducted at a face without benches. The best characteristic values in the technological and economic respect were obtained with the schemes shown in Figs. 2 and 3. Short-delay blasting was applied in all cases. Compared with fuse blasting, short-delay blasting gave much more favorable results. It is recommended to use at least 10 to 12 delay steps. There are 3 figures, 1 table, and 1 Soviet reference.

ASSOCIATION: IGD AN KazSSR (IGD AS Kazakhskaya SSR) Ibrayev, Sh. I. and Arykov, A. I.; shakhta No. 45 Dzhezkazganskogo rudoupravleniya (Mine No. 45 of the Dzhezkazgan Mine Administration) Kanafin, K. N.

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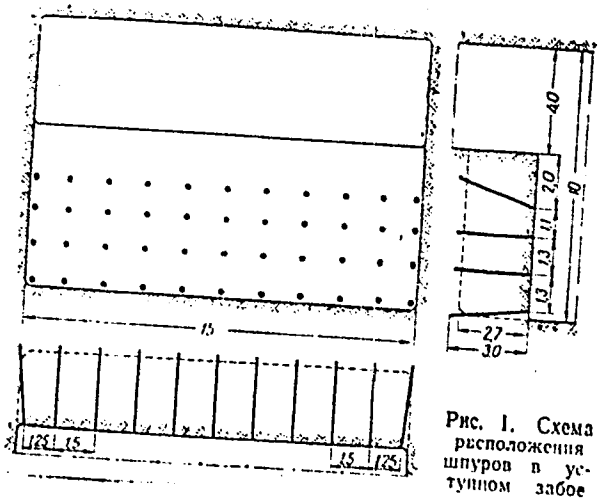

Рис. 1. Схема расположения шпуров в уступном забое

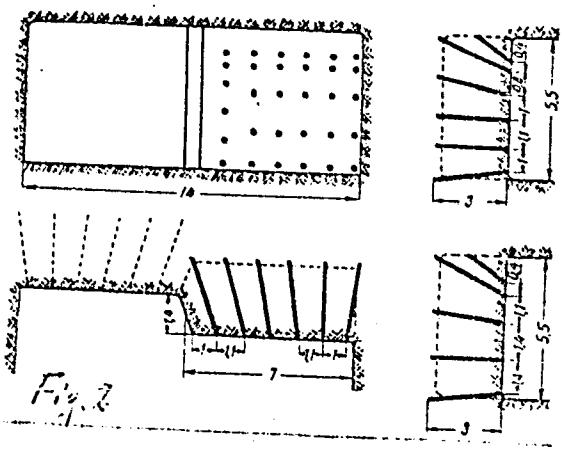

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Fig. 2

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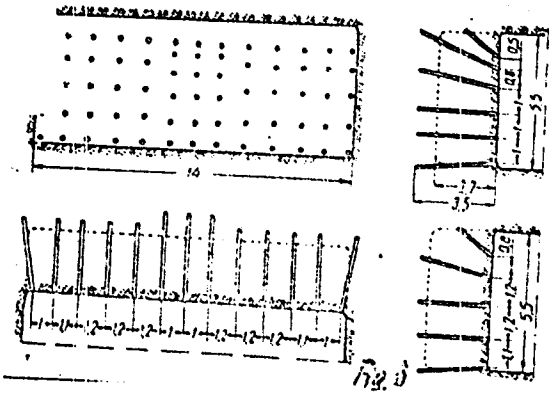

Fig. 3

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Legend to Fig. 1: Scheme of the positions of holes at a face with benches.
Legend to Fig. 2: Scheme of the positions of holes at a face without benches with a central one-sided cross-cutting.
Legend to Fig. 3: Scheme of the positions of holes at a face without benches for breaking without cross-cutting.

X

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

IBRAYEV, Sh.I.; ARYKOV, A.I.

Some results of laboratory testing to study the effect of the charge diameter on the degree of crushing in the blast area. Trudy Inst. gor. dela AN Kazakh. SSR 6:136-145 '60.

(MIRA 13:12)

(Blasting--Testing)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

IBRAYEV, Sh.I.; ARYKOV, A.I.; DASHKIN, I.K.; TLEUZHANOV, N.T.

Parameters of boring and blasting operations with use of drill rigs. Trudy Inst. gor. dela AN Kazakh. SSR 7:130-138 '60. (MIRA 14:6)

(Boring) (Blasting)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKOV, A.I.

Effect of the diameter of the charge and the line of least resistance on the amount of oversized ore. Trudy Inst. gor. dela AN Kazakh. SSSR 10:120-127 '63. (MIRA 16:8)

(Blasting)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKOV, P.A.

USSR/Miscellaneous - Foundry processes

Card 1/1 : Pub. 61 - 13/23

Authors : Arykov, P. A.

Title : Obtainment of pure horizontal surfaces on steel castings

Periodical : Lit. proiz. 3, 27-28, May-June 1954

Abstract : The technology employed by certain armor plate foundries for the purpose of obtaining clean horizontal surfaces on steel castings is described. The work and equipment necessary to carry out such technological process are explained. Drawings.

Institution : ...

Submitted : ...

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKOV, P.A., inzhener.

Mechanized ramming of large-sized molds. Lit.proizv. no.7: 12-13 Jl '56. (MLRA 9:9)
(Foundry machinery and supplies)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKOVA, A.I.; ZHULAYEV, R.Zh.

Hydraulic and sedimentary conditions in an intake works with bottom gallery. Izv.AN Kazakh SSR Ser.energ.no.6:28-49 '54. (Dams) (Hydraulics) (MLRA 9:4)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ZHULAYEV, R.Zh.; ARYKOVA, A.I.

Hydraulic calculations of a pressureless water intake with bottom gallery. Izv.AN Kazakh.SSR.Ser.energ. no.7:10-46 '54.
(Hydraulic engineering) (MIRA 8:12)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ZHULAYEV, R.Zh.; ARYKOVA, A.I.

Hydraulic and sedimentary conditions in slit openings. Izv.AN Kazakh.SSR.Ser.energ. no.8:67-74 '55. (MLRA 8:12)
(Hydraulic engineering)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKOVA, A.I.

Results of investigation of the flushing sluice of trench sand and gravel traps. Izv.AN Kazakh.SSR.Ser.energ. no.10: 48-63 '56. (MLRA 9:12)

(Hydraulic engineering)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

8(6), 14(6)

SOV/112-59-2-2689

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 2, p 58 (USSR)

AUTHOR: Arykova, A. I., Zhulayev, R. Zh., and Sugurov, Sh. B.

TITLE: Major Shortcomings in the Operation of Small Mountain Hydroelectric Generating Stations of Kazakhstan and Measures for Eliminating Them (Osnovnyye nedostatki raboty malykh gornykh GES Kazakhstana i puti ikh ustraneniya)

PERIODICAL: Izv. AN Kazakhskaya SSR. Ser. energ., 1957, Nr 1(12), pp 17-26 (summary in Kazakh)

ABSTRACT: A survey of over 40 hydroelectric generating stations in southern districts can substantiate the following general characterization of their operating conditions: (1) most stations have no engineering-type water intakes; (2) there is almost no silt control; (3) nearly all stations experience great difficulties during the winter period; (4) most stations have construction and layout of hydraulic structures which do not meet requirements of mountain

Card 1/2

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

Major Shortcomings in the Operation of Small Mountain Hydroelectric . . . .

streams. Major design shortcomings are: (1) unlucky selection of site of many hydroelectric generating stations; (2) inadequate allowance for long-range development of the district; (3) imperfect construction and layout of water intakes, settlers, spillway structures, and headwater reservoirs; (4) assigned low stream speeds in channels insufficient for frazil-ice removal. Major causes of inadequate operation of the stations are: (1) relatively low engineering qualifications of the service personnel; (2) absence of proper supervision and technical guidance; (3) absence of operating instructions, etc. Ways of eliminating the above shortcomings are suggested.

Yu.M.S.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKOVA, A.I.

Characteristics of spiral stream motion in a pipe with a longitudinal aperture. Izv. AN Kazakh.SSR. Ser.energ. no.1:35-48 '59. (MIRA 12:11)
(Pipelines)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKOVA, A.I.

Flow characteristics of a helicoidal stream with varying discharge values. Izv. AN Kazakh. SSR. Ser. energ. no.2:17-27 '60.
(MIRA 14:3)

(Pipe—Hydrodynamics)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKOVA, A.I.

Losses of head due to the inflow of additional water into a pipe carrying a helicoidal stream. Izv. AN Kazakh. SSR. Ser. energ. no.2:28-34 '60. (MIRA 14:3)

(Pipe—Hydrodynamics)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKOVA, A.I.

Trench-type sand and gravel collectors in canals. Trudy Inst. energ. AN Kazakh. SSR 2:175-182 '60. (MIRA 15:1)
(Hydroelectric power stations--Water supply) (Canals)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKOVA, Amilya Idrisovna; ZHULAYEV, Rakhmet Zhangazovich; KOLTOCHNIK, N.I., red.; KOROKINA, Z.P., tekhn.red.

[Improved type of water intake with a screened bottom gallery] Uluchshennyi tip vodozabora s donnoi reshetchatoi galereei. Alma-Ata, Izd-vo Akad.nauk Kazakhskoi SSR, 1961. 79 p. (MIRA 14:5)

(Water-supply engineering)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKOVA, A.I., kand. tekhn. nauk

Equations for a helical flow at a variable rate in a circular tube. Vest. AN Kazakh. SSR 20 no.1:27-36 Ja '64. (MIRA 17:3)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKOVA, R.

Dynamic investigation of some blood coagulation components in hypertension and atherosclerosis. Zdrav. Kazakh. 23 no.4:32-36 '63. (MIRA 17:5)

1. Iz kafedry gospital'noy terapii (zaveduyushchiy - prof. R.A. Satpayeva) Alma-Atinskogo meditsinskogo instituta.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYKOVA, R.I.

Interaction of some components of blood coagulation in hypertension and atherosclerosis. Zdrav. Kazakh. 22 no.9: 14-17 '62. (MIRA 17:2)

1. Iz kafedry gospital'noy terapii (zav. - prof. R.A. Satpayeva) Kazakhskogo meditsinskogo instituta.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARynchin, N.I.

USSR/Human and Animal Physiology - Blood Circulation. R-5

Abs Jour : Referat Zhur - Biol., No 16, 1957, 70741

Author : Arynchin, N.I., Zenkevich, I.S.
Inst :
Title : Half Century of Application and Further Development of Krotkov's Sound Method for the Determination of Human Blood Pressure.

Orig Pub : Physil. Zh. SSSR, 1957, 43, No 1, 92-95

Abstract : No abstract.

Card 1/1 - 4 -

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

5(4)

AUTHOR: Arynov, A.

SOV/20-123-1-10/56

TITLE: The Flow of a Gas From a Vessel With Walls Which Form the Small Angle $2\theta_0$ (Istecheniye gaza iz sosuda so stenkami, zaklyuchayushchimi mezhdu soboy malyy ugol $2\theta_0$)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 1, pp 43-46 (USSR)

ABSTRACT: First, the case of an outflow with subcritical velocity is dealt with. This problem can be solved in the same manner as the problem by Chaplygin (Ref 1). Formulae are given for the flow function ψ and for the velocity potential φ. By using this formulae it is possible to find an equation for the boundary of the beam. In Mach (Makh) numbers $M<1$ there is an asymptotic development, the form of which is written down in this paper. The recurrence formulae derived by F. I. Frankl' according to the method of Chaplygin are given and explained. The formulae derived here apply also to the flow of water in a shallow river bed as well as to an ultrarelativistic gas or a photon gas. The second part of this paper deals with the flow of a liquid with critical velocity. In this case Chaplygin's auxiliary

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function is determined by an asymptotic formula by F. I. Frankl'. Finally, numerical data are given for a perfect biatomic gas and also for the case of an outflow of water or of a photon gas. There are 2 figures, 1 table, and 4 Soviet references.

ASSOCIATION: Kalbardino-Balkarskiy gosudarstvennyy universitet (Kalbardino-Balkarskiy State University)

PRESENTED: June 14, 1958, by L. I. Sedov, Academician

SUBMITTED: June 14, 1958

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYNOV, Asanbay, Candidate Phys-Math Sci (diss) -- "Isentropic stable relativistic flow of a gas". Frunze, 1959. 10 pp (Kirgiz State U), 150 copies (KL, No 26, 1959, 123)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

10 (6)

AUTHOR: Arynov, A. SOV/20-125-3-12/63

TITLE: Steady Relativistic Flows of a Gas of Axial Symmetry (Vortex Case)(Ustanovivshiyesya relyativistskiye techeniya gaza s osevoy simmetriyey (vikhrevoy sluchay))

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 3, pp 512-514 (USSR)

ABSTRACT: The author starts from the relativistic sound equation $\left[g^{ik} + \left(\frac{1}{a^2} - 1\right)u^i u^k\right]\left(\frac{\partial v_i}{\partial x_k} - v_q \Gamma^q_{ik}\right) = 0$ and from the vortex equation $u^k\left(\frac{\partial v_i}{\partial x_k} - \frac{\partial v_k}{\partial x_i}\right) = T\frac{\partial \sigma}{\partial x_i}$, where v_i denotes the pseudovelocity and σ the entropy of the unit of remanent energy. The second formula is an invariant one. Laminarity conditions are then added to the above-mentioned system of equations. The system which is composed of all the hitherto mentioned equations gives a determinant which must vanish. By evaluating the determinant the following equations are obtained:

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$(u^1 dr - u^2 dx)^3 = 0$, $\frac{dr}{dx} = \frac{B}{A} \pm \frac{1}{A}\sqrt{B^2 - AC}$, and therefrom $tg(\theta \pm \alpha) = \frac{dr}{dx} = \frac{1}{A}(B \pm \sqrt{B^2 - AC})$. The coordinate axes are given in a way that $tg\,\theta = u_r/u_x$. Then for the tangent of the Mach angle in the meridian plane it holds $tg\alpha = \frac{1}{\sqrt{\beta u^2 - 1}}$, where $\beta = \frac{1}{a^2} - 1$; $u^2 = u_x^2 + u_y^2$; $u_x = \frac{dx}{ds} = u^1$, $u_r = \frac{dr}{ds} = u^2$, $u_\varphi = r\frac{d\varphi}{ds} = ru^3$. ds is the differential of the proper time. Along the characteristics, linear relations must hold between the differentials dv_0, dv_1, dv_2, dv_3, $d\sigma$, and ds.

The author then derives an equation which holds along the Mach lines along the meridian. The calculations discussed in this paper lead to the following conclusion: Along the stream lines, specific entropy σ, the Bernoulli constant $J_0 = v_0 = \frac{J}{\sqrt{1 - w^2}}$ (w denotes the modulus of the ordinary

Card 2/3

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Steady Relativistic Flows of a Gas of Axial Symmetry (Vortex Case) SOV/20-125-3-12/63

velocity), and the circulation of the transversal pseudovelocity must be constant. The formula derived in the present paper corresponds to the classical formula, but the ordinary velocity has to be replaced by the pseudovelocity $v_i = Ju_i$. In the case $J \to 1$ it holds $i_0 = i + \frac{w^2}{2} = \text{const}$ and $\Gamma = 2\pi u_\varphi = \text{const}$. For variable Γ and i_0 this result seems to be a new one also for classical gas dynamics. There are 2 Soviet references.

ASSOCIATION: Kabardino-Balkarskiy gosudarstvennyy universitet (Kabardino-Balkarskiy State University)

PRESENTED: December 12, 1958, by L. I. Sedov, Academician

SUBMITTED: December 10, 1958

Card 3/3

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ACCESSION NR: AR4015123 S/0124/63/000/012/B002/B002

SOURCE: RZh. Mekhanika, Abs. 12B6

AUTHOR: Aytmurzayev, T.; Ary*nov, A.; Arkabayev, N.

TITLE: One-dimensional unstable motions of gases with consideration of electromagnetic fields

CITED SOURCE: Sb. Materialy* 10 Nauch. konferentsii prof.- prepodavat. sostava fiz.-matem. fak. Sekts. fiz. Frunze, 1961, 39-41

TOPIC TAGS: gas motion, gas mechanics, electromagnetic field

TRANSLATION: For a system of equations describing unstable one-dimensional relativistic motions of a superconductive gas in an electromagnetic field, the authors write out a system of characteristic equations which permit the numerical computation of the flow field under the specified initial conditions. V.A. Skripkin.

DATE ACQ: 31Dec63 SUB CODE: PH ENCL: 00

Card 1/1

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

AKYNOV, A. A. (Frunze)

"Isentropic Stationary Relativistic Gas Flows."

report presented at the First All-Union Congress on Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb 1960.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

S/058/61/000/012/004/083
A058/A101

AUTHORS: Frankl', F.I., Arynov, A.A.

TITLE: Photon-gas discharge from a vessel through a Lavalle nozzle

PERIODICAL: Referativnyy zhurnal, Fizika, no. 12, 1961, 22, abstract 12A340 (Uch. zap. Kabardino-Balkarsk. un-t, 1959, no. 3, 63 - 65)

TEXT: On the basis of the relativistic dynamics of gases, the authors investigate steady discharge of a photon gas from an infinitely wide vessel through a Lavalle nozzle for given temperature in the vessel.

[Abstracter's note: Complete translation]

Card 1/1

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

L 6428-66 EWT(d)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/T-2/EWP(t)/EWP(k)/EWP(z)/
ACC NR: AP5020646 SOURCE CODE: UR/0147/65/000/003/0131/0135
EWP(b)/EWA(h)/ETC(m) IJP(c) MJW/JD/WW/EM
AUTHOR: Arushenskiy, Yu. M.; Kaluzhskiy, I. I.

ORG: None

TITLE: Calculation of strains and stresses in sheet punching of transversely isotropic materials

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 3, 1965, 131-135

TOPIC TAGS: aerospace structure, aerospace engineering, titanium alloy, sheet metal, tensile strength, stress analysis

ABSTRACT: Extensive use is being made in recent years of titanium alloys in the manufacture of the various components of aircraft and rockets. Sheet punching is one of the major processes in the manufacture of these components. In spite of the fact that a methodology has been developed for the calculation of sheet punching operations, it requires further improvement with respect to titanium alloys. The present authors attempt to derive equations for the case of transverse isotropy, employing the generalized Hooke's law. For the purpose of verifying the fundamental theoretical expressions, the authors performed tensile tests of specimens with a working length equal to the width. The tensile test results of VT1-2 alloy specimens, 1.2 mm thick, are presented as an example. It is noted that the deviation of the theoretical data from the experimental is within the measurement limits. The theory given is being used for the investigation of the process of stretching the VT1-2 and OT4-1 titanium alloys and makes it

Card 1/2 UDC: 621.983.1

0901 1996

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

L 6428-66

ACC NR: AP5020646

possible to give a satisfactory analysis of this process. Orig. art. has: 15 formulas and 1 table.

SUB CODE: AS, MM / SUBM DATE: 22Jun64 / ORIG REF: 003

Card 2/2 nw

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ACC NR: AR7004885 SOURCE CODE: UR/0276/66/000/009/V032/V032

AUTHOR: Aryshenskiy, Yu. M.; Shil'meyster, B. D.; Fedorova, T. M.; Yurkenik, T. A.

TITLE: Problems related to wrapping VT1-2 and OT4-1 titanium alloys

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 9V235

REF SOURCE: Tr. Kafedry proiz-va letatel'n. apparatov. Kuybyshevsk. aviats. in-t, vyp. 20, ch. 2, 1965, 55-59

TOPIC TAGS: titanium alloy, material deformation, mechanical properties, wrap forming, jacketing

ABSTRACT: A study was made of the maximum permissible amount of deformation of billets at which maximum strain hardening does not affect the initial mechanical properties of the material. The samples were exposed to stretching prior to obtaining 2, 3, 5, 10, 12 and 15% of the residual elongation, after which the experimental data were correlated with those obtained by calculation. It was determined that in work-hardening by tension up to 5—5%, the mechanical proper-

Card 1/2 UDC: 621.981.011

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ACC NR: AR7004685

ties of the specimen remain within the limits of the specifications, and that parts can be manufactured from these materials by wrap-forming without subsequent annealing. A study was made of the effect of changes in the mechanical properties due to deformation by stretching and the changes in the permissible amount of thinning and narrowing of the material on the overall amount of deformation by wrapping. Orig. art. has: 3 figures. S. Shirman. [Translation of abstract]

[AM]

SUB CODE: 11, 13/

Card 2/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ACC NR: AR7004884 SOURCE CODE: UR/0276/66/000/009/V032/V032

AUTHOR: Aryshenskiy, Yu. M.; Kaluzhskiy, I. I.; Farmanova, V. N.

TITLE: Application of a coordinate grid for the study of wrapping titanium alloys with anisotropic properties

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 9V234

REF SOURCE: Tr. Kafedry proiz-va letatel'n. apparatov. Kuybyshevsk. aviats. in-t, vyp. 20, ch. 2, 1965, 61-68

TOPIC TAGS: ccordinate system, jacketing, titanium alloy, anisotropic property, Hooke law

ABSTRACT: In order to determine the amount of deformation and stresses a grid, consisting of osculating circles 10 mm in diameter, was applied to one of the sides of the sheet specimen, using the photocontact method. The standard pattern of the grid was plotted on a transparent plastic sheet and measured with a microscope accurate to 1 μ. During the experiment, the osculatory circles turned into ellipses; the dimensions of the axes of the latter were used for determining the resultant

Card 1/2 UDC: 621.981.011

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ACC NR: AR7004884

deformation with the aid of formulas. Since VT1-2 and OT4-1 alloys have transversal isotropy, an attempt was made to derive an equation showing the relation between the deformations and the stresses using a generalization of Hooke's law. The equations were experimentally tested by stretching specimens of which the effective length was equal to their width. Original article has a bibliography of 4 reference items. S. Shirman. [Translation of abstract] [AM]

SUB CODE: 11, 13/

Card 2/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ACC NR: AR7004887 SOURCE CODE: UR/0276/66/000/009/V032/V032

AUTHOR: Aryshenskiy, Yu. M.; Kaluzhskiy, I. I.

TITLE: Calculating the mold and force required for stretch wrap

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 9V237

REF SOURCE: Tr. Kafedry proiz-va letatel'n. apparatov. Kuybyshevsk. aviats. in-t, vyp. 20, ch. 2, 1965, 69-74

TOPIC TAGS: molding, mold, stretch wrap, metal stress, stretch forming

ABSTRACT: In determining the shape of a mold for stretch wrap with equal stresses and deformations over the entire length, the authors analyze a chart of linear state of stress which makes it possible to determine the width of the blank. The formulas derived for calculating the required force make allowances for the effect of frictional force and the changes in the cross-sectional area, and contain the actual stress instead of its assumed value, σ_b, in approximation formulas. The experimental verification of the formulas derived for VT1-2 and OT4-1 alloys showed agreement between calculated data and the readings of the pressure gage.

Card 1/2 UDC: 621.981.011

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ACC NR: AR7004887

The original article has 4 figures and a bibliography of 1 reference item.
S. Shirman. [Translation of abstract] [AM]

SUB CODE: 11, 13/

Card 2/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYSTANBEKOV, Khaydar Arystanbekovich, kand.ekonom.nauk; KURINA, Ye.A., red.; GUBIN, M.I., tekhn.red.

[Successes of Kazakh state farm in solving the grain problem] Uspekhi sovkhozov Kazakhstant v reshenii zernovoi problemy. Moskva, Izd-vo "Znanie," 1957. 31 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.3, no.15) (Kazakhstan--State farms)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYSTANGALIYEV, S.

"Flora of the Fodder-Yielding Kungey Alatau Grasslands within Kazakhstan's Boundaries." Acad. Sci. Kazakh SSR, Inst. of Botany, Alma-Ata, 1955. (Dissertation for the Degree of Candidate of Biological Sciences)

SO: Knizhnaya Letopis', No. 22, 1955, pp 93-105

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYSTANGALIYEV, S.

Meadow vegetation of the Kungey Ala-Tau within the boundaries of Kazakhstan. Trudy Inst.bot.AN Kazakh.SSR 4:130-175 '56. (MLRA 10:2)
(Kungey Ala-Tau--Pastures and meadows)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYSTANGALIYEV, S.

Materials on the vegetation of the Kungey Ala-Tau Forage lands. Izv. AN Kazakh. SSR. Ser.biol., no.11:93-131 '56. (MLRA 10:2)
(KUNGEY ALA-TAU--PASTURES AND MEADOWS)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYSTANBALIYEV, S.

Steppe vegetation of the Kungey Ala-Tau. Izv. AN Kazakh.SSR. Ser. biol. no.1:66-85 '57. (MLRA 10:8)
(KUNGEY ALA-TAU--STEPPE FLORA)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

Country : USSR
Category : Weeds and Weed Control. N

Abs. Jour. : Ref Zhur-Biologiya, No. 24, 1958, No. 63633

Author : Arystangaliyev, S.
Inst. : Institute of Botany, Academy of Sciences *
Title : Weeds in the Pastures of the Kazakhstan Part of Kungey Ala-Tau

Orig. Pub. : Tr. in-ta botan. AN KazSSR, 1957, 5, 89-115

Abstract : Wood species not consumed by cattle appear as formation builders. Some of these, tarragon (Artemisia dracunculus), nettle (Urtica cannabina), Rumex tianschanica, beakchervil (Anthriscus semula), Persian goldenray (Ligularia persica), monkshood (Aconitum excelsum) falsehellebore (Veratrum lobellianum) are encountered

* Kazakh SSR

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APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

Country : USSR
Category : Weeds and Weed Control N

Abs. Jour. : RZhBiol, No. 14, 1958, No. 63633

Author :
Institut. :
Title :

Orig Pub. :

Abstract : All the weeds have developed in localities where both the soil and vegetation covers have been considerably altered as a result of intensified cattle grazing. The herbage of the contaminated phytocoenoses grown on soils rich in organic matter is distinguished by its high density, tall growth and predominant composition of

Card: 3/5

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

Country : USSR
Category :

N

Abs. Jour. : RZhBiol., No. 14, 1958, No. 63633

Author :
Institut. :
Title :

Orig Pub. :

Abstract : burning. The utilization of contaminated hay fields as pasture (in summer and fall) decreases the amount of weeds, because moderate grazing improves the herbage by increasing the grass composition.--L.D. Stonov

Card: 5/5

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYSTANGALIYNV, S.

A large monograph. Reviewed by S. Arystangaliev. Vest. AN Kazakh. SSR 14 no.4:100-101 Ap '58. (MIRA 11:6)
(Bet.-Pak-Dala--Plants)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYSTANGALIYEV, S.; RAMAZANOV, Ye.

Materials for a botanical dictionary. Trudy Inst. bot. AN Kazakh. SSR 10:188-256 '61. (MIRA 14:5)

(Botany—Dictionaries)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYSTANGALIYEV, S.; RAMAZANOV, Ye.

Materials for a botanical dictionary. Trudy Inst. bot. AN Kazakh. SSSR 11:241-269 '61. (MIRA 15:3)
(Kazakhstan--Botany--Dictionaries)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYSTANGALIYEV, S.A.

Dictionary of plant names of the family Leguminosae. Trudy Inst. bot. AN Kazakh. SSR 15:237-260 '63. (MIRA 16:9)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

NI, P.S.; GRIN'KOV, N.P.; ARYSTANOV, I.D.

Technical and economic comparison of variants of panel development. Nauch. trudy KNIUI no.14:24-38 '64.

Improving the panel system of developing seams in conditions of Karaganda Basin mines. Ibid.:62-78 (MIRA 18:4)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

FILIPPOV, S.I.; ARYSTYNBAYEV, T.Zh.; SUROVTSEV, G.S.

Oxidizing steel smelting processes in a laboratory rotary furnace. Izv. vys. ucheb. zav.; chern. met. no.2:10-14 '60. (MIRA 15:5)

1. Moskovskiy institut stali.
(Rotary hearth furnaces--Testing)
(Steel--Metallurgy)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

PANOSYAN, A.K.; ARYTYUNYAN, R.Sh.; AVETISYAN, N.A.; ZAKARYAN, S.V.; NIKOGOSYAN, V.G.

Joint effect of nitrogen-fixing and activator bacteria on sugar beet crops. Dokl. AN Arm. SSR 35 no.3:141-144 '62. (MIRA 16:6)

1. Institut mikrobiologii Akademii nauk Armyanskoy SSR.
2. Chlen-korrespondent AN Armyanskoy SSR (for Panosyan).
(Microorganisms, Nitrogen-fixing)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ACC NR: AP6033306 SOURCE CODE: UR/0409/66/000/004/0605/0610

AUTHOR: Aryuzina, V. M.; Shchukina, M. N.

ORG: All-Union Scientific Research Chemicopharmaceutical Institute im. S. Ordzhonikidze, Moscow (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut)

TITLE: Synthesis of substituted imidazo[5,1-b]benzimidazoles. Part 1. 3-(4'-Pyridyl)- and 3-phenyl-4-methylimidazo[5,1-b]benzimidiazoles

SOURCE: Khimiya geterotsiklicheskikh soyedineniy, no. 4, 1966, 605-610

TOPIC TAGS: benzimidazole, organic sulfur compound, organic nitrogen compound, chemical synthesis

ABSTRACT: The synthesis of certain derivatives of imidazo[5,1-b]benzimidazole was carried out by heating 1-methyl-2-[(N-phenylthiocarbamoyl)amino]methylbenzimidazole in high-boiling solvents or in the melt, and also by heating formyl or acetyl derivatives of 1-methyl-2-aminomethylbenzimidazoles with phosphoryl chloride. 3-(4'-pyridyl)-4-methylimidazo[5,1-b]benzimidazole (VIII) and its mercapto derivative (X) were synthesized as follows:

 UDC: 547.789.5+543.422

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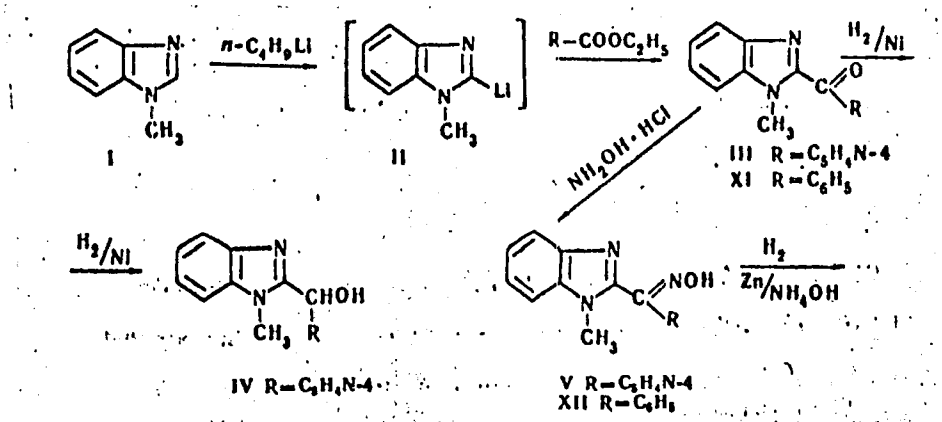
"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ACC NR: AP6033306



Card 2/4

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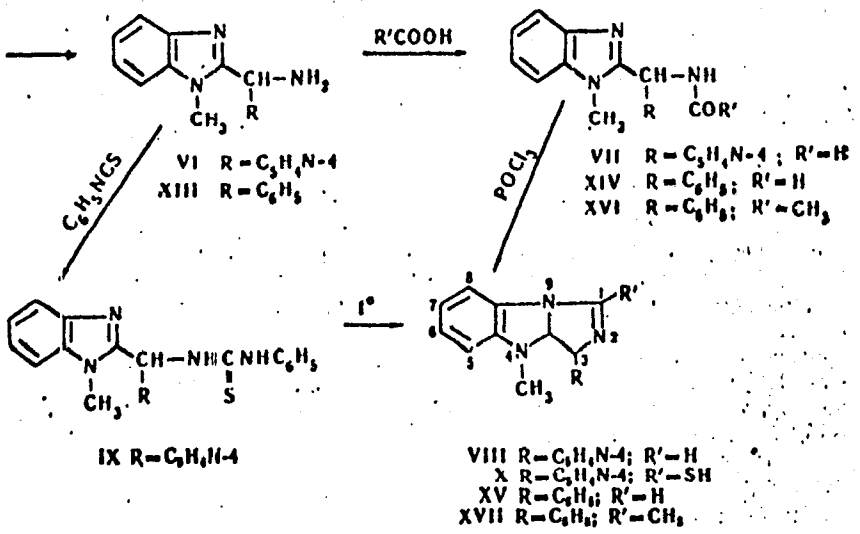
"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ACC NR: AP6033306



Card 3/4

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ACC NR: AP6033306

The melting points of the compounds were (in °C): (III) - 134.5-135; (IV) - 158-159; (V) - 252.5-253 (dec.); (VI) - 102.5-103.5; (VII) - 236-238; (IX) - 171.5; (XI) - 70-71; (XII) - 248-248.5; (XIII) - 113.5-144; (XIV) - 185-186; (XVI) - 183.5-184.5; (VIII) - 204.5-206; (X) - 215.5-216; (XV) - 130.5-131; (XVII) - 133-135. Orig. art. has: 2 tables.

SUB CODE: 07/ SUBM DATE: 08Feb65/ ORIG REF: 003/ OTH REF: 004

Card 4/4

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYZGULOV, S.

Koshkar today. Neftianik 6 no.4:6 Ap '61. (MIRA 14:8)

1. Starshiy inzhener promysla Koshkar, Gur'yevskoy oblasti.
(Koshkar (Gur'yev Province)--Oil fields--Production methods)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYZGULOV, S., starshiy inzh.

Field operator Nabira Shagirova. Neftianik 6 no.3:11 Mr '61.
(MIRA 14:10)

(Petroleum workers)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARYZGOV, S., starshiy inzh.

Remote control of pumping oil out of tanks. Neftianik 6 no.10:19-20 O '61. (MIRA 14:10)

1. Neftepromysel Kochkar.
(Pumping machinery)
(Remote control)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARZAMANOVA, I.G.; GUR'YANOVA, Ye.N.; GOL'DSHTEYN, I.P.

Determination of the thermodynamic constants of molecular compounds by means of dielectrometric titration. Dokl. AN SSSR 155 no.6: 1391-1393 Ap '64. (MIRA 17:4)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. Predstavleno akademikom S.S.Medvedevym.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

L 45232-65 EWT(m)/EPF(n)/EWP(t)/T/EWP(t)/EWP(b)— Pc-4/Pr-4 IJP(c) JD/
ACCESSION NR: AT5008626 RM S/2933/64/007/000/0076/0083

AUTHORS: Arzamanova, T. G.; Gur'yanova, Ye. N. (Doctor of chemical sciences) 38

TITLE: Investigation of complexes of organic sulfides with iodine

SOURCE: AN SSSR. Bashkirskiy filial. Khimiya sernoorganicheskikh soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh, v. 7, 1964, 76-83

TOPIC TAGS: organic compound, sulfide, dielectric constant, intermolecular bond, octane, dipole moment, iodine compound

ABSTRACT: The properties of a number of organic sulfide compounds with iodine were studied. The dielectric constant and the density of iodine solutions in an unpolarized solvent (octane) during successive small additions of the second component were measured. The experiments were carried out at 25C with solution concentrations of 0.02-0.04 mole/liter. The organic sulfides were prepared chiefly at the IOKh BashFAN SSSR. Ye. N. Karaulova and N. P. Volynskiy of the Institut neftekhimicheskogo sinteza AN SSSR (Institute of Petroleum-Chemical Synthesis, AN SSSR) supplied some, and the remainder were synthesized by the authors. For iodine-thiophene and iodine-diethyl sulfide, it was found that, up to molar concentrations of 1:1 of the components, the dielectric constant increases

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ACCESSION NR: AT5008626

sharply, meaning that molecular compounds with large dipole moments have formed. These dipole moments of complexes of the various alkyl sulfides with iodine proved to be nearly identical, which indicates that the polarity of the donor-acceptor bonds is approximately the same for all. Where differences were observed

[illegible] the fact that [illegible]

[illegible]

figures and 1 tables.

[illegible]

SUBMITTED: 00 ENCL: 00 SUB CODE: GC

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Card 2/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102320001-2

ARKHIPOVA, I.G.; GUR'YANOVA, Ye.N.

Heats of formation, dipole moments, and ultraviolet spectra of the molecular compounds of iodine with organic sulfides. Dokl. AN SSSR 157 no. 2:375-377 Jl '64. (MIRA 17:7)

1. Fiziko-khimicheskiy institut imeni Karpova. Predstavleno akademikom S.S. Medvedevym.

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TUROVA, N.Ya.; GIRGOR'YEV, A.I.; NOVOSELOVA, A.V.; AFZAMANOVA, I.G.; GUR'YANOVA, Ye.N.

Structure and properties of the complex compound $BeCl_2 \cdot AlCl_3 \cdot 3(C_2H_5)_2O$. Dokl. AN SSSR 164 no.3:590-593 S '65. (MIRA 18:9)

1. Moskovskiy gosudarstvennyy universitet i Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im. L.Ya. Karpova. 2. Chlen-korrespondent AN SSSR (for Novoselova).

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ARZAMASKOV, B.P., inzh.-izyskatel'; YERMOLAYEVA, S.S., starshiy inzhener-proyektirovshchik; FINOGENOV, M.P.(Ordzhonikidze)

Improve the quality of instruments. Put' i put. khoz. no. 8:43 Ag '58. (MIRA 11:8)

(Measuring instruments)

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YERSHKOVICH, I.G., prof.; ARZAMASKOVA, G.A., kand. med. nauk; GOL'DFEL'D, N.G., kand. med. nauk; GORYACHEV, Yu.Ye., kand. med. nauk; LYAKHOVA, V.N., kand.med. nauk; REDKINA, Ye.I., kand. med. nauk; CHIPKASOVA, N.D., kand. med. nauk

"Manual on eye diseases; vol. 2 book 2. Reviewed by I.G. Ershkovich and others. Vestn. oftal. 76 no.4:88-95 Jl-Ag '63 (MIRA 17:1)

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ARZAMASOV, B. N.

"Study of the Hardening and Annealing Properties of Structural Steel in Isithermal Treatment." Min. Higher Education USSR, Moscow Order of Labor Red Banner Higher Technical School imeni Bauman, Moscow, 1955. (Dissertation for the Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letopis', No. 22, 1955, pp 93-105

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Arzamasov, B. N.

Metr: 44l2o

Investigation of hot media for the isothermal treatment of steel. L. I. Sidorin and B. N. Arzamasov. *Metalloved. i Termichesk. Obrabotka Metal., Sbornik Statei* 1955, 6-19.—The rate of cooling V, degree/sec., of cylindrical specimens of 18 Cr-9 Ni steel heated at 900 ± 15° in molten baths of mixts. of the systems KNO_3–$NaNO_2$, KNO_3–$NaNO_2$, 35% NaOH–65% KOH, and 35% NaOH–64% KOH–H_2O and in machine oil maintained at 360 ± 5° and at 20–30° above the m.p. of the fused mixts. was detd. by automatic recording of the temp.–time function. V was independent of the compn. of the molten bath. In the temp. range of the bath of 160–400° the rate of cooling of the specimen at 650° was expressed by $V_{650} = 1010 - t - 0.022t^2$ and at t = 150–55°, $V_{650} = 1258 - 0.135t - 0.00353t^2$. The cooling capacity increased in the presence of H_2O. L. B.

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Translation from: Referativnyy zhurnal. Metallurgiya, 1957, Nr 1, p 205 (USSR)

AUTHOR: Arzamasov, B. N.

TITLE: A Thermokinetic Diagram of 30KhGSA Steel (Termokineticheskaya diagramma stali 30KhGSA)

PERIODICAL: V sb.: Termicheskaya obrabotka metallov (MVTU, 70). Moscow, Mashgiz, 1956, pp 22-30

ABSTRACT: A description is given for plotting thermokinetic diagrams for 30KhGSA steel by the thermal (TM) and the structure-hardness (SHM) methods. Curves taken with different rates of cooling of the centers of specimens were recorded on an oscillograph by the TM. The points of inception of the thermal effect on the cooling curves were joined by a continuous line which indicates the beginning of disintegration of the supercooled austenite (A) during continuous cooling. A specimen used in plane surface hardening was used for the SHM. After plotting the curves of cooling of several points on the surface of the specimen and determining their hardness in relation to the cooling time, the lines of the thermokinetic diagram were obtained by cross-plotting the hardness values onto

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the cooling curves and joining the points of equal hardness. Analysis of the data obtained showed that the TM has low sensitivity and affords the determination of the beginning of the disintegration of the A only, though it is simple to accomplish. Curves plotted by the SHM agree well with curves constructed by the magnetic method, which latter method, however, is not applicable for low-carbon steels.

K. M.

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SOKOLOV, Konstantin Nikandrovich; SHMYKOV, A.A., doktor tekhn.nauk, retsenzent; RUSTEM, S.L., kand.tekhn.nauk, retsenzent; SAMOSHIN, I.G., kand.tekhn. nauk, retsenzent; ARZAMASOV, B.N., kand.tekhn.nauk, retsenzent; LAPKIN, N.I., kand.tekhn.nauk, red.; DUGINA, N.A., tekhn.red.

[Equipment of heat-treating shops] Oborudovanie termicheskikh tsekhov. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1957. 420 p. (MIRA 11:4)

1. Kafedra termicheskoy obrabotki metallov Moskovskogo vysshego tekhnicheskogo uchilishcha im. Baumana (for Samoshin, Arzamasov)
(Metals--Heat treatment)

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SOV/137-59-5-11404

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Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 5, p 274 (USSR)

AUTHOR: Arzamasov, B.N.

TITLE: On Hardenability by Quenching and Annealing of Structural Steel in Isothermic Treatment

PERIODICAL: V sb.: Materialy Nauchno-tekhn. konferentsii po probl. zakalki v goryachikh sredakh i promezhutochn. prevrashcheniyu austenita, Vol 1, Yaroslavl', 1957, pp 150 - 161

ABSTRACT: The hardenability by quenching and annealing of 30KhGSA steel cooled in various hot media was investigated by measurements of hardness, the microstructural method and superimposing of cooling curves of specimen surfaces and cores on therokinetic curves of austenite transformation in continuous cooling. It was stated that already a specimen of 12 mm in diameter was not fully hardened to the lower bainite, since austenite desintegrated partially at the moment when the specimen surface attained the temperature of the pool. Investigations into the hardening ca-

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On Hardenability by Quenching and Annealing of Structural Steel in Isothermic Treatment

pacity of 12 different hot media consisting of KNO_3, $NaNO_3$, $NaNO_2$, NaOH, KOH alone or in various combinations showed by recording the cooling curves that the cooling capacity did not depend on the composition of the pool but on its temperature. Addition of water to the pool and mixing of the hot media increased the cooling capacity, the more effectively, the lower the temperature of the medium was. The use of interrupted isothermal quench-hardening with intermediate water-cooling increased considerably hardenability of steel by quenching and annealing. Residual deformation after such treatment was much lesser than after conventional quench-hardening and tempering. Toughness was the same as after isothermal hardening.

N.K.

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ARZAMASOV, B.N.

PHASE I BOOK EXPLOITATION 650

Moscow. Moskovskoye vyssheye tekhnicheskoye uchilishche. Kafedra "Termicheskaya obrabotka metallov"

Termicheskaya obrabotka i prochnost' metallov i splavov; sbornik statey (Heat Treatment and Strength of Metals and Alloys; Collection of Articles) Moscow, Mashgiz, 1958. 177 p. 5,500 copies printed.

Ed.(title page): Pogodin-Alekseyev, G.I., Doctor of Technical Sciences, Professor; Ed. (inside book): Yegorkina, L.I.; Tech. Ed.: Tikhanov, A.Ya.

PURPOSE: This book is intended for engineers and technicians in the machine-building industry, scientific workers at research institutes and industrial laboratories, and for students taking advanced courses at higher technical institutes.

COVERAGE: This collection of articles is devoted to problems of mechanization and automation of heat-treating processes and to investigations of the mechanical properties of metals and alloys as affected by their composition and by heat-treatment conditions. The experimental work was done by researchers at the Moskovskoye vysshaye tekhnicheskoye uchilishche imeni Baumana (Moscow High-

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er Technical Institute imeni Bauman), the Vsesoyuznyy zaochnyy politekhnicheskiy institut (All-Union Correspondence Polytechnic Institute), The L'vovskiy politekhnicheskiy institut (L'vov Polytechnic Institute), and the Stalingradskiy mekhanicheskiy institut (Stalingrad Mechanical Institute). For references and further coverage, see Table of Contents.

TABLE OF CONTENTS:

Author's conclusions: 1. In MSt.3 steel with a coarse grain, obtained by superheating (normalization at 1350°C. for 7 minutes) the upper threshold of cold shortness is 80° higher than in steel normalized at 920°. The energy absorbed in the fracturing of the superheated steel in the pasty state was as low as 19 kilogram-meters, while in the case of specimens normalized at 920° it exceeded 30 kg-m. The sharp difference in the properties of superheated and normalized steel is preserved even after subsequent treatment, such as cold hardening with a reduction of 10 percent, quenching at 700°, strain aging, and quench aging, although these treatments produce effects in varying degree.

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tling effect of the enumerated treatments (except strain aging) on the properties of superheated coarse-grained steel is relatively less than on fine-grained steel. The same reduction in the area (10 percent) in the given case causes a smaller decrease in the energy required to cause failure in the pasty state (from 19 to 15 kg-m). Quenching at 700° does not decrease, but actually somewhat increases, the energy required for failure in the transformation range. Subsequent quench aging also decreases the toughness to a lesser extent. At room temperature the energy absorbed in fracturing the coarse-grained steel decreased after aging from 19.4 to 17.9 kg-m, or by 8 percent. The fine-grained specimens did not fracture before aging, but after aging their fracture was accomplished with 25.5 kg-m of energy, i.e., the decrease in toughness was large. However, shifting of the upper threshold of cold shortness, as caused by the above types of treatment, was the same with coarse- and fine-grained steel. 3. As regards strain aging, however, the decrease in plasticity and toughness is greater in the case of coarse-grained steel. At 20°C. strain aging does not reduce the energy absorbed in fracturing fine-grained steel (about 19 kg-m), but the energy to fracture the large-grained steel drops from 19.7 to 14.7 kg-m. The shift in the threshold of cold-shortness is the same in both cases. The effect of strain aging is apparently linked with the effect of cold hardening. If the same degree of cold hardening causes a bigger drop in toughness and plasticity

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(in the case of fine-grained steel), embrittlement with subsequent aging will be less, and conversely.

Arzamasov, B.N., Candidate of Technical Sciences; Marinchev, S.G., Engineer. Increasing the Hardenability of a Shaft by Interrupted Quenching in Water 19

Author's conclusions: 1. For purposes of analyzing the cooling process in quenching, it is possible to use the method of superimposing the cooling curves on the thermokinetic diagram. 2. The hardenability of a 40Kh-steel main shaft for the transmission of the ZIL-150 automobile can be increased by interrupted quenching in water, thus rendering oil quenching unnecessary. 3. The suggested method of quenching permits full automation of the heat-treating process. (There are 2 references, both Soviet.)

Samoshin, I.G., Candidate of Technical Sciences, Docent. Automatic Unit for Heat Treating Sewing Machine Needles 28

The author describes the unit, which was designed and built at the Moscow Higher Technical School imeni Bauman. The unit, consisting of thirteen separate sections, carries out the operations of hardening, washing, and tempering. In addition to needles, it can also handle other cylindrical objects of small diameter, such as watch axles, rollers for small bearings, etc.

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According to Kuznetsov, the output of bearings greatly increased at the plant after World War II, both in actual volume and in number of types. As a result, a special office was created at the plant for designing and putting into operation more modern, efficient heat-treating equipment. Such new equipment, now in operation at the plant, includes electric hardening furnaces with vibrating floors; conveyer-type electric and gas furnaces; rotary gas and electric furnaces; shaft-type electric furnaces for carburizing, hardening, and tempering of large-sized parts; conveyer-type electric tempering furnaces; pusher-type annealing furnaces; and high- and low-temperature electric muffle furnaces. The new equipment has made possible the complete automation of heat-treating processes. Various problems of further improving heat-treating equipment are discussed.

It is shown that as the diameter of the specimens is increased, the tensile strength and elongation decrease, both with ordinary and isothermal heat

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treating. This seeming contradiction is explained by a favorable interaction between the cooling rate and thermal stresses in the case of the small-diameter specimens. There are 2 references, both Soviet.

Pogodin-Alekseyev, G.I., Doctor of Technical Sciences, Professor; Vasil'yeva, A.G., Candidate of Technical Sciences. Strength and Plasticity of Steel in the Recrystallization Temperature Range 53

The authors describe anomalous changes in strength and plasticity which occur during the recrystallization temperature range. There are 9 references, of which 8 are Soviet and 1 is German.

Rakhshtadt, A.G., Candidate of Technical Sciences, Docent; Shur, D.M., Engineer. Properties and Heat Treatment of Alloys for Elastic Elements of Instruments 65

A highly sensitive method was developed and a device designed for testing the properties of metal diaphragms for instruments. The diaphragms tested were made of beryllium bronze, phosphor bronze, and a high-alloy steel (N36KhTYu) containing nickel, chrome, titanium, and aluminum. Tests made on the diaphragms after heat treatment showed that their properties depend strongly on the temperature and length of aging, during which a decomposition of solid solutions takes place. Aging increases hardness and the elastic limit up to a certain maximum, whose position in time depends on

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the temperature of aging. Hysteresis, residual deformations, and sag are at their minimum approximately at those temperatures at which the properties associated with strength are most pronounced. Thus it is seen that these properties of the diaphragms are linked with the structure of the alloys: the higher the resistance to the development of microplastic deformations, the smaller the degree of hysteresis. On the basis of these findings, certain methods of heat treatment are recommended for diaphragms made of the alloys specified above. There are 43 references, of which 25 are Soviet, 17 English, and 1 is French.

Pogodin-Alekseyev, G.I., Doctor of Technical Sciences, Professor; Petisova, M.M., Candidate of Technical Sciences. Change in Microstructure, Type of Fracture, Hardness, and Coercive Force of Steel in the Blue-brittle State 115

The authors' investigations led to the following conclusions:
1. The change in the type of fracture of the specimens corresponds to the change in toughness and plasticity in the blue-brittle temperature range. At testing temperatures of 100-400°C., the fracture changes from coarsely fibrous to finely fibrous. At 400° crystalline zones appear. At 525-550° the crystalline zones achieve their maximum extent, and the plane of fracture becomes "stepped", as if laminated. At higher temperatures, the fracture again becomes fibrous. 2. A microscopic study of crack distribution showed that at 525-550° the fracture ordinarily takes place along the grain boundaries, but in tough specimens it is usually transcrystalline. No substant-

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ial difference in the structure of tough and brittle specimens was observed at magnifications of up to 1700 times. 3. The hardness of specimens that were impact-tested at blue-brittle temperatures and cooled to room temperature was rather high as compared with specimens tested at lower temperatures. This indicates a certain residual brittleness caused by the impact test in the 500-550° range. 4. Measurement of the coercive force of brittle and tough specimens showed no numerical difference for specimens retaining some brittleness after being heated in the blue-brittle range. Hence it is seen that the development of blue brittleness is not accompanied by a decomposition of solid solutions. 5. On the basis of the above, it would appear that the marked lowering of plasticity caused by blue brittleness is associated with a deformation process or with diffusion processes developing at elevated temperatures in the boundary layers of the grains, which processes, however, do not lead to the precipitation of dissolved constituents, but do cause embrittlement of the grain boundaries. There are 3 references, all Soviet.

Arkhipov, A.M., Candidate of Technical Sciences. Heat Treatment for Improving the Properties of Cast Iron Teemed in Metal Molds 125

Author's conclusions: 1. Temper hardening is necessary for obtaining a uniform structure along the cross section of the specimen, for increasing hardness and wear resistance, and for improving the mechanical properties of the cast iron. 2. Quenching results in an increase in hardness and a

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decrease in strength. 3. Tempering at a temperature of 350-450°C. results in a uniform structure, decreased internal stresses, and maximum possible tensile strength, together with reduced hardness. 4. Quenching of cast iron teemed in metal molds is more effective than quenching of ordinary gray iron, since in the former case the graphite inclusions, strongly affecting the mechanical properties, differ greatly in shape, size, and distribution from those in ordinary gray iron. There are 5 references, all Soviet.

Arkhipov, A.M., Candidate of Technical Sciences. Effect of Silicon Content on the Mechanical Properties of Cast Iron Teemed in Metal Molds 139

The author's investigation shows that the graphitizing action of silicon in cast iron is at its maximum when the silicon content is about 3 percent. Five heats of gray iron were studied, the specimens differing only in their silicon content (1.41%, 1.63%, 1.84%, 2.16%, and 2.37%) and in the method of casting (in permanent metal molds and in loam molds). Results showed that both tensile strength and hardness decreased as the silicon content increased, regardless of the type of mold, but that the tensile strength of the specimens cast in metal molds exceeded that of those cast in loam molds by about 1.5 percent. A linear relationship between tensile strength and silicon content was established, and an empirical formula derived for calculating the tensile strength of a specimen of known silicon content. It was established that the chilled surface

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by S.O. Tsobkallo. The method is based on the determination of the path of motion of the specimen. The authors obtain equations that give the relationship between the elastic energy stored in the specimen, the amplitude of vibrations, the amount of energy dissipated, and the damping factor. The equations further account for the magnitude of working stresses imposed on the specimens and also determine energy dissipation per cycle, which is not obtainable ordinarily with the damping factor alone. These considerations, when applied to N36KhTYu steel, show that dissipated energy per cycle as a function of stress loading rises with increased stress, which is explained as the effect of microplastic deformation. At the same time, the higher the resistance of the metal to small plastic deformations, i.e., the higher the elastic limit, the smaller the dissipation increment. In particular, minimum values for the dissipation increment and its rate of increase are observed in specimens tested after hardening from a temperature of 950°C. and aging at 700° for 2 hours, when their elastic limit is at its maximum. There are 3 references, all Soviet.

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Pogodin-Alekseyev, G.I., Doctor of Technical Sciences, Professor; Zhuravlev, S.V., Candidate of Technical Sciences. The nature of Deformation in the Yield Zone 169

This theoretical discussion is divided into three sections: Köster's hypothesis; Processes of plastic flow with small deformations; Flow --an intergranular shifting. There are 45 references, of which 21 are Soviet, 19 English, 4 German, and 1 French.

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SOV/137-58-11-22957

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 161 (USSR)

AUTHORS: Arzamasov, B. N., Marinchev, S. G.

TITLE: Increasing the Depth of Hardening of Shafts by the Method of Time-quenching in Water (Uvelicheniye prokalivayemosti vala metodom preryvistoy zakalki v vode)

PERIODICAL: V sb.: Term. obrabotka i prochnost' metallov i splavov. Moscow, Mashgiz, 1958, pp 19-27

ABSTRACT: So as to strengthen the core of the transmission main shaft of the ZIL-150 automobile which is made of 40Kh-grade steel, the process of its cooling was investigated and cooling curves were drawn for four methods of cooling: 1) In water, 2) in water for 50 sec, then in air, 3) in water for 30 sec, then in air, and 4) in oil. The optimum procedure was worked out on the basis of the superposition of the curves obtained over the thermokinetic diagram of 40Kh-grade steel. Experimental verification carried out on 9 shafts corroborated the data obtained in the investigation. The following procedure for the quenching of shafts in water is recommended: Heating to 850°C, soaking for 1 hour, quenching in 15-30° water for 40 to 50 sec, and

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Increasing the Depth of Hardening of Shafts by the Method (cont.)

subsequent cooling in air.

T. F.

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1003/1203

AUTHORS: Prokoshkin, D. A., and Arzamasov, B N

TITLE: A circulation method of inmpregnation molybdenum with some elements

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam v 9 1962. Materialy Nauchnoy sessii po zharoprochnym splavam (1961 g),177–183

TEXT: Molybdenum alloys may only be used as heat-resisting materials after their surface has been given a proper protection against oxidation. In this work the results are given of heating molybdenum alloys with chlorides of silicon, aluminum, zirconium or chromium in gaseous mixtures of hydrogen. The reaction which take place on the surface of molybdenum during these precesses are:

$$Mo + 2AlCl_3 + 3H_2 \rightarrow MoAl_2 + 6HCl$$
$$Mo + 3AlCl_3 + 4.5H_2 \rightarrow MoAl_2 + 9HCl$$
$$Mo + 0.5ZrCl_4 + H_2 \rightarrow 0.5Mo_2Zr + HCl$$

A similar process carried out with chromium did not succeed. In this circulation process the hydrogen chloride generated in the above chemical processes is continuously reused as it serves as a carrier of the diffusing elements to the surface of the treated metal. A description of two schemes of apparatus for the conduction of this process is given, as well as photomicrographs of the surface layers of molybdenum treated as above. There are 7 figures and 1 table

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